Notebook, PN-07-06-15

This pocket notebook was begun by Edison in June 1907 and was probably used until mid or late 1908 for notes and drawings regarding experimental work and other tasks to be performed at the laboratory. Many of the experiments pertain to the composition and performance of Edison's alkaline storage battery. Others relate to phonographs and phonograph records; radium, "scintillation," and radiation; the chemical properties of boron and boron compounds; and Edison's kinetophone. Among the employees mentioned in connection with individual experiments are Ralph Arbogast, Walter E. Holland, Alexander N. Pierman, and Herman Wolke. The book also contains numerous entries regarding patent, business, and personal affairs. Included is a reminder to pursue a patent on a "new kiln aging process" for cement and to evaluate recent patents on phonograph record blanks. Also included is a comparison between process patents and musical copyright. In addition, there are notes pertaining to Edison's investments, the Essex Press, the Douglas Phonograph Co., the costs of cement production, and market shares among motion picture companies. Employees mentioned in regard to these matters include Frank L. Dyer, William E. Gilmore, and Alphons Westee. Among the entries of a personal nature are notes on medical books, including one work by William Osler and another about intestinal diseases, and a remark about "setting [the] NY Sun right" on who invented the kinetograph. The pages are unnumbered. Approximately 80 pages have been used.

PN-07-06-15

110
20
130
125
255

5 | 425
125

14
4
56
25
81

81
20
110
211

June 15 1907

Use radium tube & Willemite fluorescence
& observe thru aluminum plate —
it brightens when powerful arc
lights. Violet is allowed thru
Radium on & off —

For Le Sage use 2" Round iron pointing
Center smith & 25 or 30 ft long with
Radium —

Iron is more likely to cut cos in daylight
should there only either ⊙ or Balmoral
at first & wards -

Sensitive Hours is with
Comet Tam slit — dark back
ground, then arc light thrown
on particles to reflect
light to photograph off

Scints – Try every metal to deflect scints by magnet –

Try all metals on Emery wheel –

Catch Scint particles in glycerine on glass slide then micro –

See if Scints will throw a shadow – Scints throw a shit that Kinetoscope to Enlarge on screen

Walk – Compressed air in funnel –

Write Jeremy Congdon Cressmore Quarry for samples Great Limestone –

Only suggest Sachrite Lime then Carbolating or More Sachrite Lets do Li_2CO_3 & precip by Carbolate –

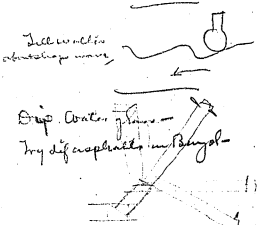
See Miller & have him write Niagara falls Soda people if we showed them 1/2 cent more lb for Na Carbolate if they get it free of $CaCl_2O_3$ & reduce the iron somewhat that we are prepared to use a considerable quantity

Draw out for Walk – 45 deg Recorder & Replay

Walk

~~Glass~~ Feby 2 1908

dip second very thin film dropper
before dipping Crystographic Cardboard
dilute to Cellosc / Throw out the Copper
Chill out second —



Recorder angle 45° Reproducer same
for reproducer round the Cutter Sapphire
Can get louder record without
jumping out —

Try film dropper & Card Sr

Oleate Ammonia see if sol
anything —

Saving Cement

	Mils
Rock Crushing by 1 Shift	8
chalk grinding loss/acclimen	6
Cement " "	5
Newcobel delivery	20
Gypsum higher lime Cement	10.
Wholesor + Rawb —	100.
steel balls —	16
10% Reduce wages	18.
increased output 5400 to 6000	36.
General improvements by changes	20
	239
	44
	283

Possible

fine grinding Coal 9 lb bbl	10
Coal for air Compressor	3
+ Oil leaking from 1 Otero	
Better Chilled plates	1
Better pkg devices —	5
Good boss fireman —	
Output 7000 days —	25 5
	44.

Excelsior — ~~Glycerine~~ (Can't give
can arrange with Geo Morrison —

Dr Ld make CP Cracker —

K permanganate is used to purify
it doesn't actually crackers

Feby 4th 1904

film dope surface - Make a Room Record
to dip film dope boat - also Coat inside of
a Washer with film - removed a Rivin Record
Stiffen the Rivin - this is a tricky method
pull film off -

Show film - Frank Oaman Cather
suggest monthly book kept up
but separate list once week -

Rumors about Wilson & Emerson
speed orders generally get them
broken -

Wattee - pay roll phone wks when 7 @ 500
more + now -

Dyer - did he patent new Kiln
aging process Cement -

The best film dope equal it
& throw in fine, dark) matter
say $SrCO_3$ - while equalizing them
heat - & then cool - remove &
back up -

data for our records the means of
$SrCO_3$ varying quality & way removed
it from theatre -

depressed in very thin Paraffin
Bright to heavy in excess of thin paraffin
feel than dip dope film -
This will detach OK if think
also is neutral electrolyte & valuable try dicks
for preliminary tests -

400 (wire) double the speed this brings wear
back to or equal to 200 (wire), but the grain
is times as thing wears -

Perhaps dip a record in very thin
Room - then dip in film dope & dry
well used it -

Blush record with Cobalt or Fe
reduce to Cu wash dry & dip or
spin this gives metal stamper
Can probably plate a thin film
on it of Cu or Ni - as stamper
ok -

obsidian - 7 $KNa_3Al_2Si_{10}O_{25}$
its orthoclase in glassy
state

Olivine Chrysolite Peridot
all 7 - $(Mg, Fe)_2SiO_4$

Vesuvianite (9 decorne) 7
$Al_{12}Ca_{24}(OH)_{10}Si_{20}O_{77}$

also Thumite

axinite $H_2(Ca,Fe,Mn)_4$
H.7. $BO(Al,Fe)_3(SiO_4)_5$
fuses easy to a black glass

staurolite 7.5 $Al(AlO)SiO_4$
infusible

Schorlomite $(Ca,Fe,Mg)_3Fe_2Ti_2$
H 7.25 $[(Si,Ti)O_4]_3$
fuses to black glass

Boracite $Mg_7Cl_2B_{16}O_{30}$ H 7

Rhodizite $K(AlO)_2(BO_2)_3$ H.8

Titanium obtained by mix
Titanic ox with 1/6 its wt of
Charcoal & high heat
Say arc mix KCy
~~[illegible]~~ to glass it melting
get Nitride —

Silicon in needles

introduced into Red hot Crucible
a mix of 3 pts Silicofluoride 1 pt
Sodium in small pieces 4
parts granulated Zinc mix
must be kept at red heat
but below clamp required to
volatilize Zinc till the clamp is
completely melted then
left to Cool, dissolves HCl
Silicon left in long needles
very hard scratch glass

~~Dana speaks the mystery~~
~~he says — where —~~

Powder up silicon 100 mesh feed
like flake & make a tube with
719 grsm — little Bismuth
little Chromium ~~little~~ phos-Cu alloy
little Si Cu alloy

7 layers Ni on 10 drams
1 lb —

5.8 comp. brass equiv to
6.34 grams Ni
10 drams 63 grams

Charles —

Make Tungsten Iron alloy
detts Ni, Co, use just one
much iron ale only as wire
give polish — then make $.50/oz
Alcoa pack in leather thoroughly
Carbonize + throw in H_2O —

detts Siliconize —

Diamond for W Walter recorded
Al_2O_3 + small quantity Si +
K or Na — fuse

get residue from CaCarbide see
if anything like crystals in it

(Oil find) A Joly Compt R
97 p 456-458 — important.

Acc Maisch Chem Centr 1889
2nd 905 — Preparation of Boron

L Gattermann (Ber 22 186-197
says
Boron is prepared by heating a
mixture of Magnesium one part
+ dry Borax Two parts (covered
with a layer of Borax to keep
the air out) in a Hessian Crucible
for a short time. The product is
powdered, extracted, 1st with H_2O
hot, then with Boiling HCl
it is then washed dried + heated
with Aluminum in a Crucible
when splendid Hexagonal
plates are obtained —

Boron Nitride by heating NH_4Cl + dehydrated Borax white powder ~~is~~ probably ~~may~~ this in Aluminum in Crucible with Atomic cubic form
Boron + Titanium Nitride -
Very many technique ~~in~~

Ramsen says practical difficulty getting Boron in that at high temp combines with Nitrogen
Says best to form Amorp Boron with Magnesium

If amorph Boron is pressed down tightly in a Crucible a hole bored in the Center of the pressed mass a Rod of Aluminum dropped in the Hole & Crucible heated to white heat, then dissolving out by KOH. large yellow Crystals of boronide obtained
If B_2O_3 & Al fused together smaller crystals are needed obtained

also see Hampe Annalen 1876 183 75

also prepared by heating powdered aluminum, Sulphur + B_2O_3 treated with H_2O Al_2S_3 dissolves see Ermalem 1867 141 268

Boron crystals monoclinic pyramid or prism

amorph Boron made by heating 70 grm Magnesium powder 210 grm Boron Triazide - dilute acid to clean & then to get rid rest impurities fuse with Borax + then cool treat HCl, see Gattermann Ber 1889 22 195 Winkler Ber 1890 23 772 Loring Annalen 1888 247 226

Aluminum Boron,
Wohler & D'ville
Annalen 1857 101 113.

Dyer patented the process
pat same & took receipts
position than a Copperwright
Long good argument

Tell Webb about Records out of
true & work on offers from
Elec man –

Bail 10/1000 30 000 Rev mm
40/1000 7500 Ft "

To make gelatin stick to Celluloid
reduce the surface slightly to
Celluloid before applying Emulsion
Leave this for Dry
when I gets Fla –

Melt Carborundum in arc furnace
ditto in presence of lots of
Aluminum in
presence of Copper –

Dyer pat pat 869114 Oct
1907 J A Tucker
process mfg Boron Carbide

chips remain suspended of time
add nitric kettle of acid – Cancel them

Pack some Silicon in fine charcoal
see if it will form Silicon Carbide
at very high temperature –
furnace first the arc –
at same time put – some
tungsten filament – in
arc furnace & report.

Melt Carborundum mixed
with Carbon in arc

Make Carbon by arc Reg process
at ordinary temp –

acetone heated with $ZnCl_2$ yields
Hexa-methyl Benzine –

Dr G Bramith Triphenyl. very
2 of Ether + petroleum Ether
Zany made – New wells
under Bi DOH for flavoid

Lake same of adjacent Carbon
Under CO or Lat + petroleum +
Soak nearly just KOH
Then dry & dip KCP
Bi Acetone – wash acetone
+ dry over temp –
boil KOH – + Rem by Sponge
Kinds tubes –

Group New tubes
dipped Cone $Sr Cl_2$
dry – then soak Cone
$NaSO_4$ – of wash out
2 KOH – + petroleum
719 2 h –

721 628 –
Group plain + 2 KOH. + 1 KOH
dip CP Bi Acetone dry + attempt
temp – boil KOH –
4 6 + 8 Range

Carbon Bromide / 66 pts –
among Boron a 12 pts
Carbon from sugar heat
Elec furnace or dissolve
in Cu or Ag – – fusing
dissolve metals out by
aqua regia + Hard
black diamond from Crystals

Moissan Compt R 1894
118 556.

Carborundum formed by mix of
Coke sand + Salt
also by fusing Silicon + Carbon
together Muhlhauser Zeit anorg Chem
1893 5 105 –

also forming Carbon Carbide
with Silicon
when by reports of C & S,
then they are in presumed
needless

Silicon Boride
Compt Rendus 1900 131 139
Hexaboride thick black
Crystals Opaque hardness
between Sapphire + Diamond
they conducted Electricity
Its salt in Silicon
Acc Schoenherr + Roscoe
latest book

L Ott make several
gallons BS [illegible]
paint for Mallory
Have him test the
paints Mallory got

Wether put up a new
7500 gm Dynamo - 4 719 Tube
plain + 2 L104 -
4 B104 - Electrotyping

Bonds Cement Co
Water "
prefd Com "

N y Phone Stock
E phone Bonds
E " Stock
E Mfg Co
E Battery Stock
E " bonds
Mining Explor Iron Stock
Amalgamated Iron ore stock
Eclipse Ore Mfg Syndicate Stock
Bergman Storage Battery Control
National Phone Stock
N y Gas Co Stock
Ogden Iron Co stock
other bonds
N y phone Co stock
E Ore milling stock
N y Conduit Co Stock

Roops if he is using heavy
iron for iron gas — Film boxes
placing for F.H. Hale & Nickel gas.
7/19 2 hours
Thru 30 fumes in
" 40 fumes in "
" 60 fumes
21 K + also 1.001 —
60 fumes — dip $BiCl_3$ XCP acetone

Having ill [illegible] about [illegible]
of Illustrations Tom [illegible]
Mr Stickney [illegible] Chromium
[illegible]
J C Kopa [illegible]
Capt Keller — Illustrations

Dyes — patent ball reproduction
Double dropping (ie) dropping
on weight —

Film ~~[illegible]~~ Mfgo acetone
Continual ~~[illegible]~~ foreign film —

Dyes water from aboard
200 Thread shape
packed

Solution to dip tubes in to be sent north —
Conc $BaCl$ from Na_2SO_4
" " " KSO_4
" $SrCl$ " Na_2SO_4
$SrCl$ " KSO_4
Anthracene in xylol solvent. | dip
" | 4 dips
$SrCl$ — $CaCl$ Na
$BaCl$ "
$CaCl$ "

Color physics gas fading — use gelatin
emulsion infected by heating bacteria then
expose the plate to mercury vapor — Cause light
to kill the spores & bacteria then develop the plate

Dyer - see Emerson's pat
878513 - injection on
strong bulging patient

Dyer get pat No
869114 Saul A Tucker
Born Canada - for
discs etc —

Try chromate Bismuth
dep tubes —

Get the Radium from
Holland & [illegible]
[illegible] —

group - 72 No Hg but good Bismuth Mix
use 719 2 h — 21 4 alkyl Liott
dup 719 - dropped Cacodylate Bi - 21 + alkyl Liott
dup tubes —
dup 72 no Hg - 719 dup Gatch tubes
Cacodylate Bi - 21 of Liott.

Look up left 72s without
Hg —

group No 72 use Bismuth reduction Liott.
719 - 21 + Liott.

group Reg 72 - 719 - dep tubes
Cacodylate Bi - 21 1/4 grm
1/2 grm 3/4 1 & 3 grm
to acc minimum Liott —

Dr Homemann Ferrum Oxydatum
Saccharatum Soluble on
alkalis - Have Dr 9 look it
up —

Dip [illegible] in all the [illegible] his [illegible] of [illegible] mixed KOH, Bi_2O_3, $BaSO_4$, Mg Thorium

also each given in an Electrolytic H2P in lead & [illegible] out.

Solution for detecting Bismuth in bright [illegible] mixed for analysis:

Dis CP. $BiNO_3$ in water containing 250 Conc. HNO_3 per litre, to a known quantity of dist. water & [illegible] phthalein then NaOH drop by drop to alkaline reaction. The precip (formed is dissolved by acetic acid, then add 2 grms Borax and Sol. dilute & heated to 70-80 + the [illegible] Assay no 15; bismuth is deposited on [illegible]

Precip phos Bismuth in parts; ~~also Chrome~~

Hexamethylen Barium by precipt. Thorium Sodium Metaphosphate with $BiCl_3$ - gelatinous mass translucent & brittle [illegible] may be of [illegible] Calcium [illegible] a big [illegible] [illegible] gold

Bi [illegible] [illegible] phos [illegible] - dissolve to [illegible]

Tri [illegible] phos & the Calcic phos & Lithium Aluminum phos [illegible] KOH, this may have something to do with the [illegible] resolution

Sodio-dibasic Orthophos
is a bad sol at ordy temps in
Mpos the water – perhaps
or tribasic Orthophos soda ph
gives this prong much
L&R gives good results
in 2% K solution

Monosodic phosphate
dissolves a large quantity
Bismuth Oxide

Di Strontic salt Orthophosphate
not decomp by alkalies

Mag Ammonic phosphate
ammonic phosphate

Tomi Pyro Metaphosphate Orthophosphate
Sol green with Ba Sr Ca Be
Zn Bi Hg Li Cd Mg Sb Mg
also Di Mag Tetrap – Meta phosphate

Chemy

Phenol in Collodion – more so in
L&R hard bottle frame small of 1011
Certh. the presents gray precipitate from
[illegible]
L&R also temps below freezing
[illegible] on hot the so good
because low [illegible]
[illegible] 1 alcohol at 100 prevent [illegible]
+ gives solid Co precipt. behind
[illegible] the 100 point temps [illegible]
[illegible] appear not [illegible] precipt
[illegible] investigation must be
[illegible] in bottle & corrosive
[illegible] 100 point slowly on [illegible]
[illegible] not [illegible] to 130 which
[illegible] the Hydrate Reagent

[illegible]
is that the ppt [illegible] the [illegible]
of [illegible] gives 105

perhaps get Hydrate Vallopp on well

Tubes — soak long while in 1st Sol
then dry — dito 2nd Sol long while
wash & put in 2d Wash
Dry dry at dead slow heat first
in 2d K — dry the way but a little more
Dry after 1st & complete operation
& dry before putting in KOH.
Make quick dry ~~[illegible]~~ quick
put in 2nd Sol or cover yet
small porosity —

Illustration 4 Examples of Each Kind

Dry one CP Chlorate KBr
and Chloro. or KCl, relational
of p dev —

Make of any Bromide Iodide
Lukes boarded if not make
Id proper use of [illegible] any

Sulphochloride Barium is usual
Lead Sulphate —

Ba Fluoride OK — Dry Acid
usual Fluorides —

Carbonated Phos Bi usual
KOH —

Antimonic is Ca Ba Sr —
in gross — worst of coming out
only K Salt usual also [illegible]
Na Salt usual — ~~[illegible]~~ little Sol in the
KOH. well & without KOH —

Dry usual Borates
Zirconates
Carbonates, especially Ca CO_3 —

Como Hydrochlorate Aniline
Soak Lukes — then wash off
recrude always Cement in
KOH, Aniline & Iode in porosity
also try hypochlorite K
usual Cement, refresh in
Iodine & Chloride —

on the 2nd run the iron go bad
on Bismuth & notice Sn long-
tube with KOH - Y Hunter thinks
is due to the KOH dissolving out
the Hg to test this get the KOH
out & put in Hg on board now
see if comes back

Make fat bullet & dip arms
in the Saturated sol. of Sodium
[illegible]
in Salt Peter & see if get
also some Permanganate through
Col & test - also try a
Battery

Pack a tube without
flake, then clean in
BiCl3 & test
~~flakes~~

As soon as get North start
with Reg & with Bi tubes
a lot of iron tests different
irons - Hg amount Hg dif

pressures - also Bi dip -

also Red ox with Hg0 mixed make kind
often changing & dissolving away dry &
sheparing [illegible]
Get all tests, use 2 long
tubes for Bi & Hg in [illegible]

Try Reproducible irons that have
gone low with Bi tubes, [illegible]
dip in Hg SOH
also reduce in Hg dip [illegible]
with a cathode [illegible]
Run irons in Dry KOH no [illegible]
to see if it changes
also try [illegible]
Get book [illegible]
short [illegible] etc -

Take out non from Bi Liter
& run as usual for what I
run last & Cobalt & red
look up all that runs of
non-acc Anodes without
Di Oth, with Nickel, & also
those fais that had Bismuth in

Charge & decay a
ground 21 also 21 Di Oth
in 1 large Cell (+)
Reg out Cell Keep heat
down then put in
small anodes & run
Reg in & see if
High Heat Feed

About Corrugating
flake after subdues
& before filling

see if strip of Ni plated
Bismuth will act as
Nickel Off. a little

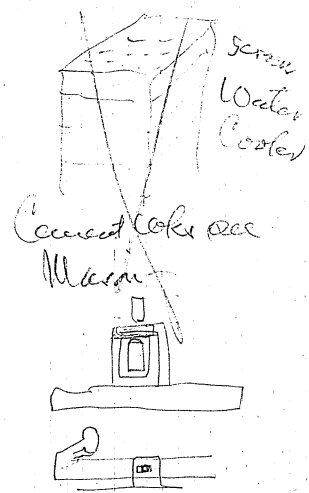
Consult with RA with
both our people &
also have RA call and
make some tests on
RA groups to get at
best green

Charge a tube that has been
running some time in
21 one in 21 2 di Oth
& one of Bi &
then wash out alkali
see which one goes
black Colloid

Take good green
make grade 21 21 1019
x 13 - 22 250
300 350 400 [illegible]
[illegible]

Precip a batch [illegible]
with KOH. use [illegible]
NaOH, use [illegible]
green [illegible]

Dilute [illegible] batch
with LiOH.



Bicho Hg perennis Treatment
Pub Scandens of Phil.

Diseases of the Stomach
& intestines
By Reed [illegible] Treat
[illegible]

Modern Practice of Medicine
by Osler & Lenox [illegible]
[illegible] Bros & Phil.

glycerin -
Try Borax or Silica - or excess Magnesia
See can get good Carpel

~~Dip tubes in [illegible] VCR Bich~~
~~Coat, dry then [illegible] Iodide~~
~~Then [illegible]~~
group 1 1 gram Bi Oxi in Sol
of Tubes dipped Hg Cl & then
Ammonia - 2 [illegible] -

Let tests of urine with tubes
dipped Bi Hydroxide -
say 30 or 40 grains - non
dipped Emetic Phos, Phosphate
Bicarbonate - 2 hr - No Hg Cl
+ Hg - Phos - No Hg Cl Bi
No Hg + Sul 2 [illegible] -
Try Red ox chrome + then dip in
Hg + Emetic Phosphate or Sulf
also no Hg - 2 Not 2 Cold

Daily men Sam 7/27
up till it gets out black
then work up off of the
black Collars & let it
dry & ship it —

The RR must evaporate out
of the iron too freely —
fill with Gold red Lake
Ni Od, Bro Ni Od in
porro by precipitation from
of Ni Cl2 & Sulphate

Try clean BS with Bone
black to clean it &
make white —
also alkali to take
Copper out —

Casparis Slag Co
sell to US Steel at
~~Steubenville~~ Ill — probably
one in Columbus
PRR Ballast. Cap
5000 tons 10 hour
in Freedom 3000
Illinois 4000 —

Ohio Casparis Slag Co
2½ m NW Columbus follow
Scioto River to lake —

Indiana. near Trimmer
Cass Co Ind —

near Stinesville Ind
Monroe Co —

Lowe & Co to distill BS
alone - down to Hardness
taking out Synopsis to
see if [illegible] [illegible] chief
for photo [illegible] [illegible]

Iron dipped Sat 5 pm
Ferric Chl in dilution
1 dip Hen. 2 dips 2nd one
opinion — 3 dips 2nd + 3rd
Lords most [illegible] — dry bot
Each — Hen Kott Hen 5 dips
all but 1st [illegible] —

also 1 dip dry Hen Kott
wash dry & dip again
also 1 dip Hen Kott 2 do
3 do —

Dally take bad B. Gum
Be sure it is not washed
in water after clean Cold —

2.13 lbs Fe. 16c 40% qual 47.74
Flake .41 not ex on H — not 40% 68.74
2.28 Ni — 4-40% qual 87.23
Hgo " " 1.92
271.63

Ni OH without qual 27.23 lbs —

get up Hydraulic
Calculation showing
Hours to put on
all elements
old pressure

Dyer about packing
wheel delivery w/
Monroney & Swazey

Kinetoscope Manoll Dance
dancer

Leland Powers
Elocutionist, Chatauqua

Mason gives us
Coal Crusher. How about
removing the crushers breaking
or a rotating cylinder
screw maybe

New Theory.

If you run Cement in a mixer
the Outer surface of Cement
becomes Calcined — Megally due
of the grit rubs off and wears
the Coal, as off of fresh
Coal and form as is worn
off — Therefore Cement is
improved automatically
by mixing way beyond
the time taken
mixing is perfect

Saturday May
11 08 pm
Orange & Chalem

Write Mason by
under leather bed
Personal Check for
matters over

Dyes = status of application
Photo Roll

Tell JVM matter of
Charles try no loss
therefore use call
Fixtures from B Box

RR 1117 Lookout

Vestal Bldg 31 - Windows
39
Luther E Gregory
Cod Engr USN

Speak McChesney Sign Electric
Edison Through

Try a 7c with the Sol. of Ca
bicarb green + peroxide
dep $HgCl_2$ alcohol or acetone
Take a bad Bi Green
+ dehydrate it at 300
in Oil - get rid Form
Hydroq

400 (Brand) asphalt
ground with Sulphur
& whole foam Expand
on mixed — MG

Viscose

Cuts machine —
use film dropping fraction it

Put up some Bismuth
MG Cold —

put up 9012 with Bismuth —

Dully reduce on
graphite — melting in
H. N. 2to 10
very high temp

Work at Hexamfield

Test machine joints —
Viscose
Internal Screw 4 friction
Checker work in Coal Kiln
Blower —
Nearest Extension of Crystal Gelum in hill
Bags —
Extra Mixing of Cement —
also
a Coulrofiqd
To separate Cement from air
Holding internal screw fan
Coal Cyst and Gadgeons

Phenoplex slight
110. name JAE
5 sh —

~~Birth Rally~~
~~Shipped to Works~~
~~March 6th 1906 —~~

~~Cabart [illegible] big [illegible] [illegible] —~~
~~(Coals Start) — Idea~~

Shows 169 Total films 531

Pathe	252	
Edison	60	
Vitagraph	60	
Kalem NY	14	458 - Combs
Selig Chicago	22	
Lubin	15	
Essanay Chicago	18	
Méliès French	12	
Gaumont French	12	
Cines Italy	12	Under
AB Lux	5	
Biograph	10	74
Edisque	5	
Nationale	28	
Odd	2	

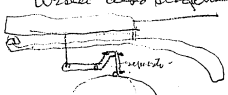
Edison 11½% -

Clement
House 18400 sqr ft - both under
outside - Each section 8 sqr ft

2300 - 275

632 cars 2600 —

Express Press – Chromatic Dept.
1 year ago –
Express Press Organized 16 months –
Pulmers stockholders –
Wistec also stockholders –

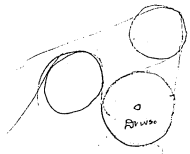


also

separate bearing
[illegible]
[illegible]
[illegible]

* also plain upright
best X bearing [illegible]
will work but without
[illegible]
the link –

Make [illegible] Viscose
instead of [illegible]



to get [illegible] room 109

① Crystal treated formaldehyde
acid at 100° gives a new
[illegible] substitute for [illegible]

for indestructible phonograph record
mix lampblack – fullers earth –
with Viscose in press + heat which
[illegible] a [illegible]

Try the Record graphite
instead of lampblack
in [illegible] –

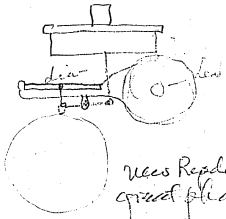
Cost film now		Dumping Cost
film	3.114	3.114
chem	0061	0061
pkg boxes	0.015	0025
Labor	0409	0327
Neg	0670	3.527
20% expense	0954	
	5.223	

Selling price film crown — 8 1/10 cents
" " Jeffers — "
Can sell at cost + make 32% profit without selling expenses.

Costs abroad London 0353
Paris 0357
Berlin 0368 duty paid

~~Wyman & Gordon~~
~~product for~~
~~J H Stoats~~
~~2 Minutes~~
~~Comment~~

Moore ~~the~~ Tin Soldier
powers
Ermini Franz Wien



Uses Reader for
general pleasure

Walter Miller Dungeon
smaller dia round 2 oz
Friend Moore Sensitive

~~looking 9010 11 12~~
~~to supplies~~

Bys:-

1 = Block Mf Co — New Zealand Phosphate Co

2 = about sec contract (Calcined) plum

3 Pongaroa Mf — reclaime [illegible] W Miller [illegible] up furnace depth How much onto

4 Blackburn [illegible] Onagaia

5 — Milfoy [illegible] of Sub-[illegible] of [illegible] lime + sand

6 Who makes plum water + who manages it? what station does work pr [illegible]

7 = about deed of [illegible]

8 = about block [illegible]

9 [illegible] output 2 million [illegible] Co

Saving	Mills	Result
Rock Crusher 1 shift	8	7/15 original
Chalk plant less cleaner	6	
Cement " "	5	
New wheel deliveries	20	
Gypsum higher lime Cement	10	
Washer + Rumb	100	
Steel shells	16	
Reduction wages	18	
Increase output 5400 to 6000	36	
General improvements	20	
	23.9	
Possibles		
Buy Coal	10	
Oil leaking 10 Pers	1	
Roller Chilled plates	1	
Machine Hummer	10	
Rumb onloading	1/4 mill	
Take up + belt mch.	1/2 mill	
Increase output to 7000	27	
3 Kilns 1 man	1/2	
Burning Coal 40,000 tons	15	
	65	
Still further		
Crushing Cement Rock	10	
Cheaper Rumb 3 + 4	10	
Discover Calcite on hill	50	
Yo[illegible] in quarry		
[illegible]	25	
Stronger bag	5	
[illegible] Coal	100	

60% Blue Rock — 840
60% Washed Ballast

25% No 304
15 Rock —

Thermoplastic Cost 75c per Ton
40c for 304 + 14 Cement
for Cement 30.10 per ton
[illegible]

20c for 304 — 60 Rock 14 Cement
23.15 ton 7.74 [illegible]

Dyer patent used
Identical —

Try 005 Scratch
longitudinal on records
& double roll —

7 layers — 1 lb of
Melted Flake —

Cent 14 — 840 —

25
40
700

14
40
840

1000
1170
301

25
40
100

15
75
100
75
75

21
20
50

100
175
65
75

500
975
840
23.15

14
6
840

23.15
NP

1 = See if O'Keefe overhauled, our OK now recorded

2 = How would it do to notify Stockholder under knuckles our claim? Have not Hazel decision —

3 = Drawing plans in Blumenman's Index 1881

4 = How does Wilmarth's Index Cover?

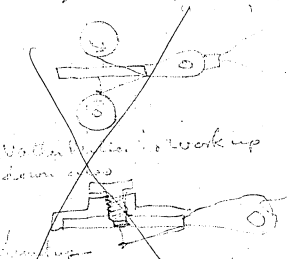
5 Dyer claims patent Bottle Rack

6 = Perrinan & Galwell. deep pr clockwk for new mechanic rylia & Continuous Keep shave

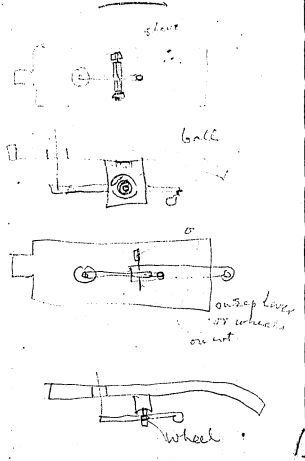
Holland - gt Perrinan on Cuts; see if Cutter or Mr. 9017 [illegible] 12

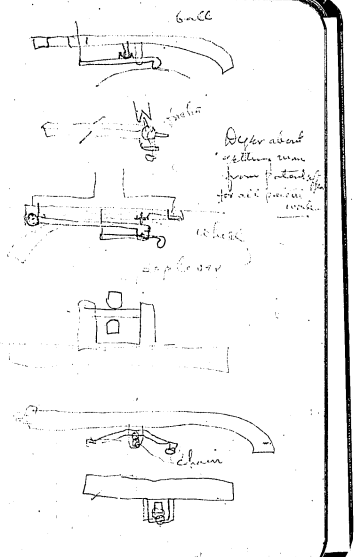
118 116 110 — [illegible]

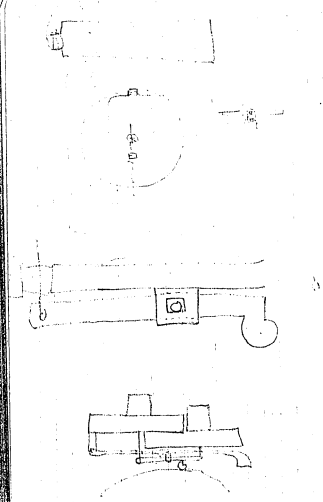
[illegible]



Otto Lilienthal's A4 glider, got out 20.5 feet in 1 sec 24.5 feet in the other showing 15½ grams lift wing area. Corner out in 12.00 inches

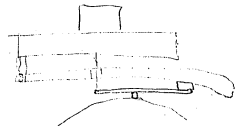






Paper packages about the size of a cigarette
Patrons to make —

Water tight — they are running over a cylinder in a set spring and rung over hinge, then [illegible] the cheap in gold moved vertical [illegible] in [illegible]



Iron in aluminum powder
Centrifuge powder on surface near
also powder —
Dally powder or oxide, Hematite
Then what [illegible] use [illegible]
in Nitrolim or other things —
also Na_2O_4, K_2O_4 —

Dr. G. ~~Army~~ ~~Sept 2nd~~ Proctor July 4, see
~~Army Schools~~ ~~Dr. Cooper~~

Separate Mention by Salmonts
powder than 200 mesh –
Try Zinc product separate also
separately –
add bottle Mercell ~~to Lanston Mell~~

add to Hot mordant vapors and
decomposed sulphides –
MnS, KS, NaS, ~~as~~ SbS.

powder Mercury 200 mesh
Look Formaldehyde No –

see if Cellulind dies – Xanthate N.Y.

Makes Centrifuge for
Record 15000 –

Buy Centrifuge for dolls
for Small Tools –

Find out where Brown
Bros 6 all Hour co
with view buying them

to get natural lake pictures
as persons appear on the stage
+ be shown in ~~[illegible]~~ 3 or 4 weeks
to get animals birds in grass etc –
If other gives the illusion of
blue sky partial or no improvement
in the art of Kodak taken very
to run to the Volumes of sound
get the distance –

Lamden

~~Send for sample 7 oz Twill~~
~~+ army Khaki~~

put Vistone mixture (add Bromo)
Mixture – group of Chemical
~~[illegible]~~ than Cover plates
~~pans~~ –

dep [illegible] of [illegible]
[illegible] — [illegible]
then [illegible] — see of
[illegible] on [illegible]

Try Sulfite in Conta
$ZnCl_2$ do
Same therapy —

Mix with Vaseline
ZnO, other oxides
& dep on glass tube
see how shrunk —

Try mixture of Calcin
& Vaseline & encap by
[illegible]

Process Vaseline in
tube with $CuSO_4$
$ZnCl_2$ etc —

Dally try burn pellet — [illegible] heine
Shakes Comets Lunie Kat [illegible] quant
dette Nobel Lusers [illegible]
Various capsules — Aspirin —
Sulfite paper

Dep Sulfite paper in mention

Try formaldehyde on Gelatin

Flow film dope on glass when
set pour mercury off [illegible] at low
temp, dilute Vaseline on glass
a pour mercury,

Fed off fix [illegible] hand again mercury
therapy [illegible] —

Gun — [illegible] with [illegible]
Glycerosol, thymol,
[illegible] from [illegible]
Morphine, Heroin, I test [illegible]
in LLD, 2 best known [illegible]
on royalty [illegible] with quarantined
[illegible], also those [illegible]
people [illegible] not [illegible]
[illegible] — Pooley, [illegible]
Geo [illegible]
Kipling — [illegible] —

gun through the [illegible] 2 turn
in [illegible] — see what reason
do with [illegible] — these were
[illegible] coat with rubber or
[illegible] —

Mix metallic oil with Vaseline
see if any dries they put on
glass slab & drop by ammonia
or water after drying with
ammonia water &c.

find which was best and
Quote 3 ounces of lake
Chrome Chromate lead 60 c.

see John Gill about Barium
not recorded

Mix Silicate Soda with
Vaseline — also put Sulph.
Silicate Soda Alone & C.62
& also with fat Mabel,
dry on plate —

See if can make chloride oil
strong to mix with Vaseline

Try mixing Oleine and
with Vaseline, then Oleine
oil —

Dissolved

Tell Dally he is fine photos
but so neat about offers
quick answers Wing & Co. Sells.

Try Talc on Wimbar —

Quote Try Ammonia yellow Sulphide lead
Turnysdall Lead & Barium Chlor.

Deposit at Prisons of John Patent in
name of Clark — Select Tiger photo
have it ready — also Tiger photo ready
my arrival Monday! see if Eakins part
of he heard a claim on mounting
shutter also Branchi —
get copy filter photo —

Weber use Thomas or more sensitive
dia on 200 Thread —

Tell Walter Miller he has less work
on 200 & be at to try smaller diameter
diaphm — to get sharpness —

1 ft Positive has .0754 gr
Silver 380 ft 1 oz Silver
about 2 mils per ft —

back up film record by washing
Silvant Sol & mix now Wash - Collect
use several lot gross silvanol

Backing film record by
Oxydol soap powder

Dilute Neat Portland or quick set
for plates

dilute Neat glue

dilute Kaolin — dilute Paraffin Emulsion

use thinner film drops then when
dry and varnish & throw in Zinc which
is spread up. also Color film drops
aniline black or blue

Tell Jura back boundness to
yr Wednesday 7 oz — tell about
film record

ask Efforts if he will send over
5 lbs of raw Nitrocellulose

Dyer Collect Petal & other
flexible Record posts

Together 30 % Earn

Where

Reg. Calle lenses 1/8 more & 1/12 thinner

amp	
156	equivalent to 900 for short lines
164	950
173	1000
182	1050
190	1100
198	1150
206	1200
214	1250
222	1300
230	1350
238	1400

4 dip thin film drops - Reg 200 thin film
Contains device -
put lead piece out on end cut

weight 31 grams

lot 59 900 grms - lose it once
or twice, but probably due to catching
dust pieces - from 29 grms + 3 %
to stand this better thickness weight
of film of specs - leave drop regard
out completely but ground edges 10
times within & outside with water
on calle lens - with weight on
30.800 OK does answer well
lot of capacity lenses in 20 grms
Cones to avoid with safety in 4
dip thin angle calle lens

film dope in which Rico[illegible] was dropped
[illegible] was perfectness. The women
after dropping down 003 thick paint
as good as liquid one of the reporters
could wear running on the roof above,
these are certainly wonderful –

Toy Acetyl-Cellulose
Viscose
Cocoa –
Alabaster
Gelatine formaldehyde
Celluloid Cellulose
Fragrantith
Bakelite Bordo (10 years of [illegible]
adhesive [illegible] flammable
by Cal.,
Rubber dry salvent [illegible]
Schlinks – gutta-Balata

Dyer about selling [illegible] Neg. Bom no gill
on [illegible] involved [illegible]
Dyer Bio people going over
[illegible] 100 cuts – [illegible]
of 1 work – Phosphorus [illegible]
our selling [illegible] Lake 3% of pre-gels
= 1

Mallory [illegible]
why [illegible] [illegible]
Clothing [illegible] which no man ever
why [illegible] [illegible] be as good
[illegible] [illegible] as [illegible] –
[illegible] [illegible]
[illegible] [illegible]
[illegible] [illegible] –
[illegible] on [illegible] –

Lous will sew a waterproof
bag –

Yeadle Poles [illegible] up on no [illegible]
[illegible] [illegible] of [illegible]

Bell Barnes [illegible] [illegible] Dynamite
[illegible] [illegible] [illegible]

bags with Viscose + BS by hand for Samples
box made –

Jet Rogers [illegible] Mixers 3 [illegible]
for Mining Viscose –

Clark Cooper quite [illegible] Cotton

Works Side movement [illegible]
on [illegible] – [illegible] of workers
[illegible] [illegible] –

New application Celluloid to surface cylinder.

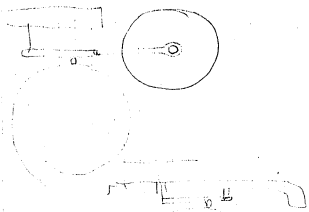
Sulphuric & Solvent to dip Jewelers in Iron soft frame to get greater completeness.

Holland 25% 2 60% or more.

Dyer – have you heard from Reader name, patent or the invention used in Birmingham in reference –

Analytical Volumes – also painted then wash surface or paint with Benzine after BS gone in to carry it in further – also BS 1st then Chemicals also Chemicals alone –

If Sr want of £100, charge ½ then turn upside down 1 hour's charge between – also charge 5 hours turn upside down 5 more then turn again to get consultation



5280

2 | 26400 | 1980

13200

2000 | 39601

20000

19600

18000

1600

9 | 1980 / 220

11

220 / 1100

660 / 1800

2 | 3960000

5 | 1980 / 396

3c

16 | 75 = 4.7

112

16 | 77 = 4.8

45 - 9 | 1980 / 220

3 | 45 / 1.80

15 mile

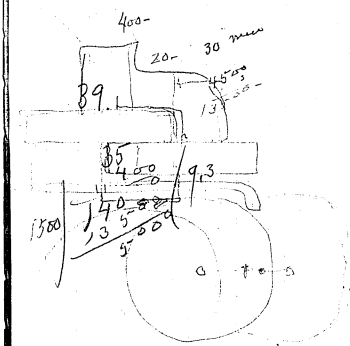
3 | 45 / 1.50

Cement 220 tons 2500

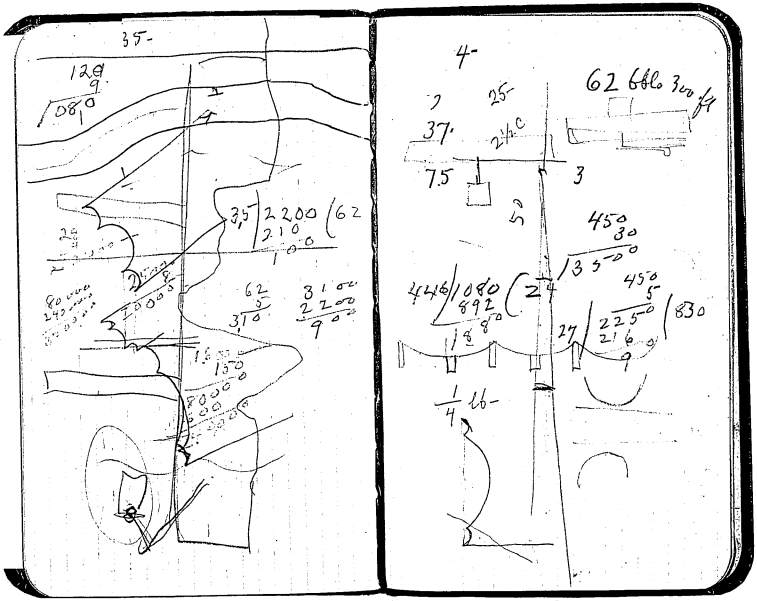
1100 Rock 600

660 Sand 1200

3300



A.C.R.A.
2000133


35-
129
9
1080
35 2200 (62
210
62
5
310
31 00
22 00
9
4-
25
37
24c
75
3
62 bbl 300 ft
450
30
135 00
448 1080 (24
892
18 80
27 225 00 830
216
9
1/4 lb-

1 = sapphire records — Why can we buy these
2 glass balls — Carborundum — S. Nelson
3 If they say we are violating patents Court is
again firm for Company, the patents have
we
4 Business machine —
5, Formula Sapphire by outsiders
6 Letters sent by Webster to people
7 = all moulds now new parades hard
about old moulds —
8 = Stombo changes on machine
9 If we have made 100 mm on machine
If they put off they claim how
much would it be —
10 Can we buy sapphire balls — No
11 Can we sell to dealers by order
Court we want formula sapphire
They will have to buy them elsewhere
Can we say this "must formula
you have to sell to dealers or we
charge $20 00 —

Can we Carborundum

500 hour

$$2240 \overline{)600000} \quad 750000 \quad 800 \quad 320$$

$$6 \overline{)600000} \quad 6 \quad 30000 \quad 5$$

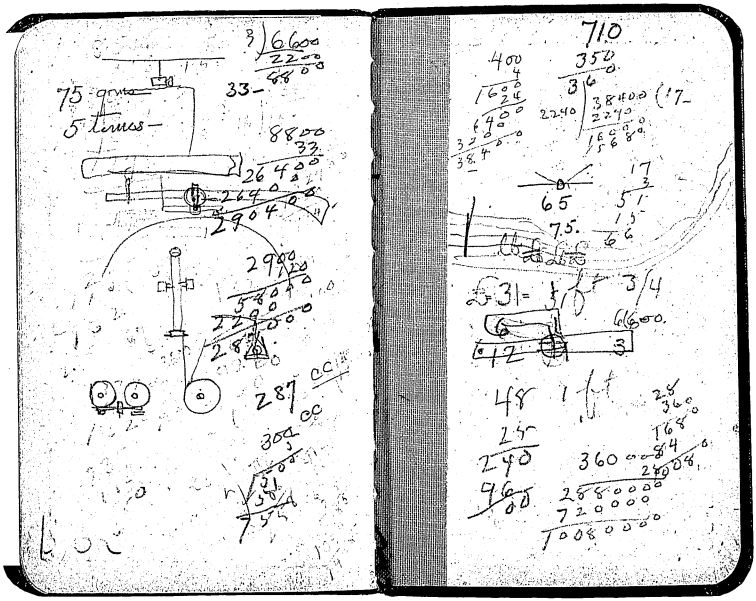
$$30000 \quad 60$$

150 —
96
24

24 million
4000
96000
200 000

$4 per

+10
239
249
150
43


75 grms
5 times
33
88 00
33
264 00
264 00
2904 00
2900
120
580
2200
2880
287 00
300
31
710
400
350
316
38400
2240
2270
1680
1568
384
17
65
51
75
66
31
3/4
6
12
3
48
1 ft
24
240
96 00
360
168
2880000
720000
1008000